Financial Restructuring in Fresh-Start Chapter 11 Reorganizations

Randall A. Heron, Erik Lie, and Kimberly J. Rodgers*

We find that firms substantially reduce their debt burden in "fresh-start" Chapter 11 reorganizations, yet they emerge with higher debt ratios than what is typical in their respective industries. While cross-sectional regressions reveal that post-reorganization debt ratios are more in line with the predictions of the static trade-off theory, they also reveal that pre-reorganization debt ratios affect post-reorganization debt ratios. Collectively, these results suggest that impediments in Chapter 11 prevent firms from completely resetting their capital structures. We also find that firms that reported positive operating income leading up to Chapter 11 emerge faster, suggesting that it is quicker to remedy strictly financial distress than economic distress.

Several high-profile firms such as General Motors, Chrysler, Enron, WorldCom, Kmart, Conseco, and multiple airlines have recently filed for protection from creditors under Chapter 11 of the Bankruptcy Code. While the intent of Chapter 11 is to reorganize the claims against the firms, a significant portion of the companies that file for Chapter 11 never emerge as stand-alone companies (Weiss, 1990; Wruck, 1990; Hotchkiss, 1995). Those that do emerge get a unique opportunity to establish a new capital structure. However, there is an ongoing debate whether the Chapter 11 process permits firms to adopt a capital structure that maximizes total value. Roe (1983) and Bebchuk (1988) argue that the Chapter 11 process imposes barriers to reducing debt, and that the process is therefore in need of reform. Alternatively, Alderson and Betker (1995) contend that the choice of capital structure for firms emerging from Chapter 11 is "free of the holdout and hidden information problems that might otherwise restrict a complete capital structure rearrangement." Indeed, Bruce Parsons, President and CEO of EBIZ Enterprises, commented that EBIZ's 2002 "reorganization plan gives us the fresh start that we need."

Consistent with Alderson and Betker's (1995) argument, Gilson (1997) finds empirical evidence that "transaction costs do not appear to be a major deterrent to reducing debt in Chapter 11." In particular, he documents that the post-restructuring debt ratios are unrelated to pre-restructuring debt ratios suggesting that the new capital structure is completely reestablished. He also finds that firms have higher debt ratios than their industry peers upon emerging from Chapter 11 but attributes this to an increase in the optimal debt ratio during the Chapter 11 process rather than to the inability of firms to extinguish debt.

We thank an anonymous referee, Ed Altman, Yakov Amihud, Matt Billett, Todd Houge, Tod Perry, and seminar participants at Baruch College, College of William & Mary, DePaul University, Norwegian School of Economics and Business Administration, Ohio State University, University of Delaware, University of Iowa, and University of Nebraska for helpful comments, and David Gilbert, Marilyn Li, Szu-Chen Lin, Sarah Rudasill, Xiaolin Wu, and Zhou Pang for valuable research assistance.

* *Randall A. Heron is an Associate Professor of Finance and Roger & Barbara Schmenner Faculty Fellow at Indiana University in Indianapolis, IN. Erik Lie is the Henry B. Tippie Research Professor of Finance at the University of Iowa in Iowa City, IA. Kimberly J. Rodgers is an Associate Professor of Finance in the Kogod School of Business at the American University in Washington, DC.*

Kahl's (2002) dynamic theory of liquidation provides further insight as to why debt levels might remain high following Chapter 11 reorganizations. According to his theory, creditors progressively learn about the economic viability of financially distressed firms during and after the Chapter 11 process. In order to maximize their proceeds, creditors support a reorganization attempt rather than an inefficient liquidation. However, to prevent liquidation-averse managers from expropriating additional value, creditors favor high postemergence debt levels, which serve to put the distressed firm on a "short rope" in case operating results are materially worse than management's projections. Thus, with high postemergence debt levels, firms that fail to meet their debt obligations because their operations are no longer economically viable can be forced to liquidate in a timely manner.

In this study, we examine the capital structures of firms that emerge from the Chapter 11 reorganization process to ascertain whether the capital structures: 1) are completely reset according to capital structure theory, 2) stem from Kahl's (2002) dynamic theory of controlled liquidation, and/or 3) reflect inefficiencies and other characteristics of the Chapter 11 process. To do so, we examine the debt ratios of 172 firms that have emerged from Chapter 11 under "fresh-start" accounting rules to determine how firm characteristics and the reorganization process affect capital structures in a multivariate setting. While Gilson (1997) examines similar issues (with the exception of Kahl's, 2002, theory, which was published later), he did so with a sample that might have been too small to uncover the underlying effects.[1] Our study also extends extant literature by examining the correlation between bankruptcy districts, the duration of the Chapter 11 reorganization process, and the resultant capital structures.

As expected, leading up to their Chapter 11 reorganizations, our sample firms have substantially more debt than their respective industry medians. For a variety of reasons, including default and/or violation of covenants, much of this debt is converted, or at least reclassified, as short-term immediately prior to the bankruptcy filings. Although short-term debt is substantially reduced during Chapter 11, firms still emerge with more total debt than their industry norms.

We next examine the determinants of debt ratios both before and after the reorganizations. Not surprisingly, the explanatory power of the regressions that test the static trade-off theory is greater immediately after firms emerge from Chapter 11.[2] The strong positive relationship between debt ratios and fixed assets is consistent with the notion that the capital structure is most aligned with the static trade-off theory at the time when firms emerge from Chapter 11. However, in contrast to the static trade-off theory's prediction that debt ratios should be positively related to profitability, we find that post-reorganization debt ratios are unrelated to profitability.

The high post-reorganization debt ratios appear to be at least partially attributable to inefficiencies in the Chapter 11 process, such as those described by Roe (1983) and Bebchuk (1988), preventing firms from completely abandoning their old capital structure and starting fresh. In particular, unlike Gilson (1997), we document a strong positive association between pre- and post-reorganization debt ratios. Thus, even for fresh-start reorganizations (where at least 50% of the firm's equity ownership is transferred to its creditors), holdout problems among creditor classes and/or clientele effects appear to play a significant role in the establishment of the emerging capital structure.[3]

---

[1]Gilson (1997) used a sample of 51 Chapter 11 reorganizations and the number of observations in his regressions range from 14 to 42.

[2]Given a longer time lapse, pecking-order effects may well come into sharper relief.

[3]James (1995) discusses the broad authority that US banks have to exchange debt for common stock in loan workout situations such as Chapter 11 reorganizations. Nonetheless, he also points out that banks never take equity unless junior claimholders such as public debtholders also take equity. We interpret this as the most direct evidence that creditor classes and/or clientele effects play a role in the capital structures of reorganized firms.

Kahl's (2002) dynamic liquidation theory might also partially explain the high post-reorganization debt ratios. However, this theory is unlikely to account for the entire explanation. First, is not clear that it can explain the positive correlation between pre- and post-reorganization debt ratios. Second, Kahl (2002) predicts that "creditors . . . require high short-term payments so that they can liquidate later if the firm does not improve its performance." However, we find that it is the long-term debt ratio, rather than the short-term debt ratio, that is particularly high after Chapter 11.

Finally, we explore the factors that influence the time spent in Chapter 11. Even though there appear to be impediments to restructuring the capital structure in Chapter 11, adjusting the capital structure is presumably easier and faster than restructuring the fundamental operations of the company. Thus, we predict that firms that are forced into Chapter 11 reorganization primarily due to financial difficulty rather than economic distress emerge relatively faster. Consistent with this prediction, we find that firms that reported only positive operating income in the periods leading up to their bankruptcies emerge more quickly than other firms. We also find that prepackaged bankruptcies spend less time under court supervision. Last, firms filing in the District of Delaware emerge more quickly from the bankruptcy process yet do not emerge with higher levels of debt. Thus, our data do not support the notion that the high rate of Delaware Court supervised "Chapter 22" filings documented by LoPucki and Kalin (2001) and LoPucki and Doherty (2002) result from a willingness of the Delaware Court to hastily approve reorganization plans with excessive debt levels.

The remainder of the paper proceeds as follows. The next section discusses related literature. Section II describes our sample. Section III presents our empirical results, while Section IV presents our summary and conclusions.

I. Literature Review

A. Capital Structure

There are two widely accepted theories of capital structure in the financial literature. The static trade-off theory, which traces back to Modigliani and Miller (1963), posits that the optimal debt level balances the benefits of debt, such as the tax deductibility of interest payments and the reduction of free cash flows, against the costs of debt including bankruptcy costs, loss of nondebt tax shields, and under investment due to debt overhang.[4] Alternatively, the pecking-order theory suggests that because of asymmetric information and signaling problems, a firm's first preference in funding investment opportunities will be internal funds, followed next by new debt, and finally, by newly issued equity (Myers, 1984; Myers and Majluf, 1984). One implication is that a firm's capital structure reflects the cumulative result of these preferences.[5]

Numerous studies empirically test the predictions of these capital structure theories (Marsh, 1982; Bradley, Jarrell, and Kim, 1984; Titman and Wessels, 1988; MacKie-Mason, 1990; Berger, Ofek, and Yermack, 1997; Graham, Lemmon, and Schallheim, 1998; Shyam-Sunder and Myers, 1999; Hovakimian, Opler, and Titman, 2001; Fama and French, 2002; Mehrotra, Mikkelson, and Partch, 2003; Dittmar, 2004; Hovakimian, Hovakimian, and Tehranian, 2004; Frank and Goyal, 2009). One major challenge that these empirical studies face is how to disentangle the trade-off

[4]Extensions to the pioneer Modigliani and Miller (1963) theory of optimal capital structure include the work of DeAngelo and Masulis (1980), Kim (1982), Modigliani (1982), Myers (1984), and Bradley, Jarrell, and Kim (1984).

[5]Baker and Wurgler (2002) propose a related theory that suggests that a firm's capital structure is the cumulative result of managerial attempts to time the equity market. Similarly, Graham and Harvey (2001) and Barry, Mann, Mihov, and Rodriguez (2008) note the importance of debt timing with respect to interest rates.

and pecking-order theories. Studies that employ cross-sectional regressions to test various aspects of the trade-off theory using broad samples from the general population of firms typically report a negative correlation between profitability and debt ratios, a result inconsistent with the trade-off theory. This relationship is likely attributable to a pecking-order effect; profitable firms tend to generate internal funds that are sufficient to fund the majority of their profitable investment opportunities. Since this would circumvent the need for external funds, the debt ratios of profitable firms would fall over time.

In response to the challenges inherent in testing capital structure theory using broad samples, researchers have recently refined their efforts to disentangle the alternative capital structure theories by focusing on either: 1) incremental financing decisions or 2) significant corporate events such as spin-offs where a new firm emerges with a fresh capital structure. Among the studies that examine incremental financing decisions, Hovakimian, Opler, and Titman (2001) indicate that while more profitable firms have lower debt ratios, they are also more likely to issue debt rather than equity. Similarly, Hovakimian, Hovakimian, and Tehranian (2004) document a negative association between profitability and debt ratios for "passive" firms (i.e., firms that do not issue or repurchase securities) but point out that this connection disappears for firms that issue both equity and debt, presumably because these firms overcome some of the pecking-order effects that have accumulated over time. The studies of capital structure following spin-offs include Mehrotra, Mikkelson, and Partch (2003) and Dittmar (2004). Mehrotra, Mikkelson, and Partch find a positive correlation between the difference in profitability and the difference in debt ratios across the parents and their spun-off subsidiaries, which they argue is due to the alleviation of pecking-order effects in their research design. Dittmar finds that size, growth prospects, and collateral values significantly influence the capital structure choice of spun-off firms, but she does not find a significant relationship between profitability and leverage in her sample.

Overall, the results of the four previously mentioned studies reveal that the negative link between profitability and debt ratios we observe in random samples is due to a pecking-order effect and that static trade-off effects often emerge when researchers focus on samples that mitigate the effects of pecking-order financing choices. Our focus on fresh-start Chapter 11 reorganizations in this study is similar in spirit to the Mehrotra, Mikkelson, and Partch (2003) and Dittmar (2004) studies in that we study a corporate event where capital structures of the emerging firms have the opportunity to be completely reset. Consequently, our analysis provides insights into the ongoing debate regarding the effectiveness of the existing bankruptcy code.

B. Chapter 11 as a Reorganization Tool

Although the Chapter 11 process includes several features (automatic stay, creditor classification, and two-thirds voting rules) designed to reduce holdout problems and to facilitate a timely and value maximizing reorganization, the effectiveness of the process continues to be debated in both the legal and financial literatures (Baird, 1986; LoPucki and Whitford, 1990, 1991, 1993; Wruck, 1990; Bradley and Rosenzweig, 1992; Hotchkiss, 1995; Weiss and Wruck, 1998). On one side of the debate, both Roe (1983) and Bebchuk (1988) argue that unlike liquidations where the proceeds from the sale of a firm's assets are known, uncertainty regarding a firm's true valuation in a Chapter 11 reorganization results in a negotiation process among different classes of creditors who attempt to maximize the size of their respective claims.[6] This type of negotiation process has at least two undesirable consequences. First, it often results in substantial and costly

[6]See Wruck (1990) for a discussion of rational behavior among parties to a renegotiation.

delays in the reorganization process as claimholders jockey for position. Second, the resulting post-reorganization capital structures are often overly burdened with debt due to strategic negotiations among claimholders who generally are reluctant to give up senior claims. Thus, post-reorganization capital structures would: 1) deviate significantly from that which would maximize the total value of the reorganized firm and 2) be tied to capital structure prior to Chapter 11.

The rational preference for senior claims in the reorganized firm is one of at least three (non-exclusive) plausible explanations for high post-reorganization debt ratios. There might also be an investor clientele effect reflected in the resulting capital structure as the post-reorganization claimants will be comprised primarily of those who ex ante preferred debt contracts rather than residual equity claims. In this regard, regulated banks face higher reserve requirements for equity claims, while public debtholders might prefer debt claims given their personal tax structure or payout preferences. Finally, creditors might rationally prefer a higher level of debt in emerging firms as it provides managers, who tend to be overly optimistic with regard to post-reorganization earnings estimates (Hotchkiss, 1995), with a short rope. This is the crux of Kahl's (2002) dynamic liquidation theory in which he suggests that higher debt ratios enable creditors to limit managerial discretion and force liquidation should promised earnings not be forthcoming.

Proponents of the existing Chapter 11 process often base their support on evidence suggesting that Chapter 11 facilitates a complete capital restructuring. One such study is that of Alderson and Betker (1995) who report that consistent with the trade-off theory, the debt ratios of firms emerging from Chapter 11 are negatively related to their liquidation costs. Moreover, Gilson (1997) reports that leverage remains higher after out-of-court restructurings than after Chapter 11 bankruptcy reorganizations and that postevent leverage is positively related to preevent leverage only for firms that restructure out of court. This evidence leads him to conclude that Chapter 11 reorganizations give financially distressed firms more flexibility to choose an optimal capital structure than do private debt restructurings.

In addition to the general debate regarding the merits of the Chapter 11 process discussed above, it is also widely believed that the interpretation and application of the bankruptcy code varies across court districts and among federal bankruptcy judges. To the extent that particular judges or districts are more or less prodebtor (promanagement), creditors' preferences for postbankruptcy capital structure would be obtained in varying degrees. For instance, the District of Delaware and the Southern District of New York (SDNY) are often cited as especially prodebtor.[7] Furthermore, LoPucki and Doherty (2002) report that firms reorganized in Delaware are more likely to require subsequent court sponsored reorganization than firms filing Chapter 11 elsewhere. It is possible that Delaware courts attract the most seriously distressed firms. It is also likely that Delaware courts do not facilitate debt reduction to the extent that courts in other districts do. We include the filing district in our multivariate analysis in order to shed further light on this issue.

II. Sample Description

We constructed a preliminary sample of bankruptcy filings from the Bankruptcy Data Source Index. Next, we hand-collected filing districts, resolution dates, and other descriptive data from the Commerce Clearing House Capital Changes Reporter, Lexis Nexis, Edgar, and Factiva and

[7]Perhaps the most notorious case of apparent prodebtor (anticreditor) policy is that of Eastern Airlines, as documented by Weiss and Wruck (1998). They document that Judge Lifland (SDNY) routinely denied creditors' requests in favor of management's (arguably excessively rosy) outlook. It took Eastern's creditors years to force liquidation while management sold their collateral to fund operating losses.

retained those firms that emerged from the bankruptcy process in fiscal year 1990 or later. We focus on firms that emerged after 1990, as technically insolvent firms that emerged from Chapter 11 after this point are required to use fresh-start accounting. In brief, fresh-start accounting is required whenever the insolvency results in a significant change in the equity ownership in the newly emerged firm. This would be the case whenever the firm's going concern value upon emergence is less than the sum of prefiling liabilities and postfiling claims and creditors effectively became the holders of greater than 50% of the equity in the newly emerged firm. The reorganization value approved in the bankruptcy plan, which is generally determined via discounting projected cash flows at risk-adjusted discount rates, serves as the new fair market value for the reorganized firm. At that point, the application of fresh-start accounting is analogous to purchase accounting for acquisitions, where all assets and liabilities are adjusted from their historical values to their newly established fair market values as specified in FASB Statement No. 141, Business Combinations. On the asset side, reorganization value is allocated to both tangible and intangible assets with any remainder not directly attributable to specific tangible or intangible assets being assigned to goodwill, as specified in FASB Statement No. 142, Goodwill and Other Intangible Assets. Liabilities are stated at the present value of amounts to be paid with equity representing the difference between the total reorganization value (assets) and liabilities. Thus, with fresh-start accounting, the debt and equity in the emerging firm are set to equal their estimated values in the final plan of bankruptcy reorganization.[8] The combination of the significant ownership change and the resetting of accounting book values to equal their estimated values in the bankruptcy reorganization plan provides an ideal setting to investigate the static trade-off theory's influence on post-reorganization capital structures as all assets and claims against the firm are adjusted to fair market values rather than historical costs. For this reason, we focus our efforts exclusively on Chapter 11 reorganizations that emerged under fresh-start accounting rules.

We also require that Compustat data be available in the year following reorganization and that the book value of assets exceed $10 million upon emergence to mitigate the influence of extremely small companies. We retain a final sample of 172 fresh-start Chapter 11 reorganizations that occurred between 1990 and 2003 with available data. Forty-six of the 172 Chapter 11 reorganizations (27%) were prepackaged bankruptcies. Further, 57 (33%) filed in Delaware and 29 (17%) filed in the SDNY. The mean and median days spent in the Chapter 11 reorganization process are 447 and 332, respectively.

III. Empirical Analyses

A. Univariate Statistics

Table I provides median financial characteristics for the sample firms in each of the following years: F-2, F-1, and E, where F refers to the fiscal year of the Chapter 11 filing and E refers to the fiscal year of emergence. We also present the corresponding industry medians, where we define the industry to be all firms in the same three-digit SIC code.

Although the median size (in terms of asset book values) of the Chapter 11 firms shrinks from $604 million to $359 million over the interval spanning from two years prior to filing to the year when they emerge from Chapter 11, the median Chapter 11 firm remains significantly

[8]Note that FASB Statements 141 and 142, released in 2001, replace APB 16 (Business Combinations) and APB 17 (Intangible Assets). With regard to the appraised values that result from fresh-start accounting, Alderson and Betker (1995) and Gilson, Hotchkiss, and Ruback (2000) demonstrate that the valuation forecasts in the bankruptcy process, though somewhat noisy, are unbiased predictors of postbankruptcy equity values.

Table I. Financial Characteristics around Chapter 11 Reorganizations

This table presents median values of various financial characteristics for 172 sample firms before they file for Chapter 11 and after they have emerged. The data for the sample firms are presented first with industry medians (where industry is defined as the same three-digit SIC code as the sample firm) below. F is the fiscal year of the filing and E is the fiscal year of the emergence. PP&E is property, plant, and equipment, while NOLC is the net operating loss carryforward. The significance tests measure whether the sample medians differ from their corresponding industry medians based on Wilcoxon-signed rank tests.

	F-2	F-1	E
Book value of assets in millions	604***	526***	359***
Industry median	152	165	173
Short-term debt/book value assets	0.031***	0.223***	0.020
Industry median	0.027	0.030	0.026
Long-term debt/book value of assets	0.490***	0.223***	0.331***
Industry median	0.205	0.212	0.189
Total debt/book value of assets	0.590***	0.717***	0.392***
Industry median	0.300	0.318	0.283
Long-term debt/market value of assets	0.416***	0.302***	0.334***
Industry median	0.131	0.147	0.126
Total debt/market value of assets	0.513***	0.630***	0.406***
Industry median	0.204	0.222	0.194
Cash/assets	0.031***	0.040**	0.062
Industry median	0.054	0.054	0.053
Market-to-book ratio of assets	1.099***	1.084***	0.980***
Industry median	1.346	1.310	1.318
Operating income/assets	0.079***	0.046***	0.075***
Industry median	0.104	0.100	0.108
Net PP&E/assets	0.352	0.372***	0.326
Industry median	0.300	0.300	0.311
NOLC/assets	0***	0***	0***
Industry median	0	0	0

***Significant at the 0.01 level.
**Significant at the 0.05 level.

larger than the median firm in its industry. Prior to their bankruptcies, the sample firms have significantly lower operating margins and cash balances, lower market-to-book ratios, higher nondebt tax shields (net operating loss carryforward), higher short- and long-term debt ratios, and substantially higher total debt ratios than their respective industry norms.[9] These relationships are, in general, not consistent with the predictions of the trade-off theory and instead likely reflect both years of accumulated pecking-order effects and the consequences of financial distress. There is a pronounced shift in the makeup of the debt prior to the bankruptcy filing. Between Years F-2 and F-1 (where Year F-1 is the year prior to filing), the median short-term debt ratio increases from 0.031 to 0.223 while the median long-term debt ratio decreases from 0.490 to 0.223 (both changes are statistically different from zero at the 1% level).

[9]We set missing values for net operating loss carryforward (NOLC) in Compustat to zero for the purpose of our analysis. Although the median ratio of NOLC to assets is zero for the Chapter 11 firms and their industries, Wilcoxon signed-ranks tests indicate that the ratio for the sample firms is significantly higher than the corresponding industry median figures. Note, however, that the Wilcoxon signed-ranks test considers only observations with nonzero differences. Because the values of NOLC are typically zero for both our sample firms and their industries, the results of the Wilcoxon signed-ranks test should be considered with caution for the NOLC variable as many observations are effectively excluded from its calculation.

There are several plausible explanations for the shift in debt composition among filing firms. One explanation is that of maturing public debt issues for which firms were unprepared to pay off the principal. Another possibility is that firms violate debt covenants or miss interest payments on long-term debt (e.g., because of a temporary shortage of funds) and, in so doing, provide long-term creditors with the right to demand immediate principal repayment. When such defaults occur, the long-term debt is typically reclassified as current.[10]

Subsequent to their emergence from Chapter 11, the sample firms' operations rebound but nonetheless continue to underperform in their industries in terms of median ratios of operating income scaled by assets. Although Chapter 11 firms materially reduce short-term debt while in court, long-term debt ratios and total debt ratios remain significantly higher than industry medians. Specifically, in Year E, the difference in median long-term debt ratios (in book value terms) for fresh-start firms versus their industries is 0.142, whereas the corresponding difference in market value terms is 0.208 (both figures are significantly different from zero). In terms of total debt, median total debt ratios for fresh-start firms (in terms of both book value and market value) remain significantly higher than industry norms. Thus, it appears that despite the turnover in ownership control that occurs for all of our sample firms, at least some debtholders remain reluctant to exchange their senior claims for equity claims in the newly emerged firm. Collectively, these results are consistent with the hypotheses that optimal debt ratios increase during the reorganization process and/or that the Chapter 11 process does not facilitate optimal debt reduction. It is also possible that the high post-reorganization debt ratios for the reorganization sample relative to the industry norm result from pecking-order effects influencing the comparisons. For example, one might argue that over time, the pecking-order effect causes accumulated earnings to depress book leverage for firms that have not sought new external financing. Since the pecking order has not had much time to affect the debt ratios of firms that have recently emerged from Chapter 11, their debt ratios might seem temporarily high relative to industry averages. As a result of this possibility, we also examine the debt ratios for multiple years after the reorganizations.[11] We find some evidence that the relatively high debt ratios converge toward the industry norm, but this convergence is slow. For instance, as reported in Table I, the median total debt ratio at the end of the year that the sample firms emerge is 0.392 as compared to an industry norm of 0.283. Two years thereafter, the median debt ratio for the sample has declined to 0.362, compared to an industry norm of 0.272.

Table II partitions the sample into subcategories depending on the time spent in court, whether they filed in Delaware or the SDNY, and whether they filed an approved plan of reorganization with the bankruptcy petition (so-called prepackaged bankruptcy). Firms reorganized in less than a year tend to be those that experienced a significant increase in the short-term debt ratio immediately prior to their bankruptcy filing. One interpretation is that these firms had larger amounts of debt concentrated with fewer creditors. Thus, any covenant violation or missed payment would trigger a larger portion of debt to be reclassified as due immediately. Fewer, yet more concentrated claimholders would also, all else being equal, tend to speed up the reorganization process as

[10]For example, Prandium Inc. and its subsidiaries elected not to pay semiannual interest obligations in 2001 and principal and interest payments in early 2002. Because the default on the interest payments gave debtholders the right (whether or not exercised) to accelerate the debt, Prandium classified all of this debt outstanding as current in its 2001 consolidated balance sheet.

[11]We recognize that there may be a couple of problems with this analysis. First, it is not clear that the pecking order would depress book leverage over time for the broader population of firms as a whole. For example, ceteris paribus, book leverage increases for unprofitable firms and firms that raise additional external funds (which, according to the pecking order, would first be in the form of debt). Second, there is significant survivorship bias during the years following Chapter 11 reorganizations, limiting the number of years afterward where valid comparisons can be made.

Table II. Financial Characteristics around Chapter 11 Reorganizations for Subsamples

This table presents median values of various financial characteristics for the sample before they file for Chapter 11 and after they have emerged. The total sample has been partitioned into subsamples on the basis of the length of the Chapter 11 reorganizations, whether the reorganization plan was prepackaged, and the filing district. Of the 172 observations in the sample, 93 reorganized in less than one year, 46 were prepacks, 29 filed in the Southern District of New York, and 57 filed in the District of Delaware. F is the fiscal year of the filing and E is the fiscal year of the emergence. Book values of assets are in millions.

	F-2	F-1	E
Panel A. Book Value of Assets			
Reorganized in less than one year	613	534	373
Reorganized in more than one year	584	517	337
Filed with a prepackaged plan	529	407	313
Did not file with a prepack	724	591	371
Filed in the Southern District of New York	1136	885	524
Filed in the District of Delaware	660	534	369
Filed in other districts	450	379	304
Panel B. Short-Term Debt/Assets			
Reorganized in less than one year	0.029	0.580	0.019
Reorganized in more than one year	0.033	0.074	0.023
Filed with a prepackaged plan	0.048	0.707	0.027
Did not file with a prepack	0.024	0.121	0.019
Filed in the Southern District of New York	0.021	0.376	0.019
Filed in the District of Delaware	0.019	0.130	0.012
Filed in other districts	0.048	0.242	0.032
Panel C. Long-Term Debt/Assets			
Reorganized in less than one year	0.512	0.122	0.361
Reorganized in more than one year	0.431	0.340	0.288
Filed with a prepackaged plan	0.522	0.048	0.360
Did not file with a prepack	0.470	0.298	0.322
Filed in the Southern District of New York	0.447	0.122	0.276
Filed in the District of Delaware	0.553	0.339	0.329
Filed in other districts	0.465	0.220	0.382
Panel D. Operating Income/Assets			
Reorganized in less than one year	0.070	0.035	0.071
Reorganized in more than one year	0.089	0.059	0.079
Filed with a prepackaged plan	0.064	0.046	0.073
Did not file with a prepack	0.083	0.047	0.078
Filed in the Southern District of New York	0.079	0.016	0.060
Filed in the District of Delaware	0.086	0.065	0.079
Filed in other districts	0.073	0.046	0.077

holdout problems would be mitigated. Consistent with this notion, Panel B demonstrates that firms filing prepackaged reorganization plans tended to experience the largest increase in short-term debt immediately prior to their filing, as their short-term ratios (from F-2 to F-1) increased from 0.048 to 0.707 compared to a much smaller increase from 0.024 to 0.121 for the other firms.

We also note that a significant portion of the sample (57 of 172 or 33%) filed their bankruptcy petitions in Delaware. This is not surprising given Delaware's dominance in the market for corporate charters (Heron and Lewellen, 1998; Daines, 2001). What is surprising given the numerous arguments that Delaware caters primarily to larger firms is that firms filing in the SDNY tend to be larger than those filing in Delaware. Consistent with LoPucki and Doherty (2002), the filing district does not appear to materially affect debt reduction.

B. Regressions of Debt Ratios

Tables III and IV report results from regressing long-term debt ratios and total debt ratios, respectively, against the book value of assets; the industry median ratio of market value of assets to book value of assets; operating income scaled by assets; net property, plant, and equipment scaled by assets; and net operating loss carryforward (NOLC) scaled by assets. Following Gilson (1997), we transform the book value of assets and NOLC scaled by assets by the logarithm. We run regressions for the end of the fiscal year that ends before the Chapter 11 filing (year F-1), the end of the previous fiscal year F-2, and the end of the fiscal year in which the firms emerge from Chapter 11 (Year E). In both tables, Panel A (B) reports the results where the dependent variable is in book (market) value terms.[12] Panel C in both tables uses industry-adjusted figures for the independent variables and industry-adjusted debt ratios (where the denominator is the market value of assets) as the dependent variable.

Firm size, as measured by the book value of assets, has been found in previous studies of capital structure to have a consistently positive effect on long-term and total debt ratios for the general population of firms (Berger, Ofek, and Yermack, 1997; Graham, Lemmon, and Schallheim, 1998). This is consistent with the notion that larger firms have greater debt capacity, presumably because they tend to be more mature and their consolidated operations are less risky such that they can afford to take on more financial risk. This general relation does not consistently show up in our sample of Chapter 11 firms.

The market-to-book ratio of assets is intended to capture the extent of the investment opportunities of the firms. Firms with good investment opportunities are predicted to use less debt financing as this would ensure that sufficient funds are available for investment purposes. Graham, Lemmon, and Schallheim (1998) document a negative correlation between market-to-book ratios and the use of debt financing. Because investment opportunities are likely to be similar across firms in the same industry and since many of the sample firms lack market-price data, we use the median market-to-book ratio of firms with the same three-digit SIC code in the regressions. Gilson (1997) also uses industry median market-to-book ratios in this context. The results indicate, however, that, in general, the industry median market-to-book ratio is not significantly related to the debt ratios (long-term and total) prior to the bankruptcy filing and subsequent to the emergence from Chapter 11. This is the case regardless of whether we measure capital structures in book value terms (Panel A in Tables III and IV) or market value terms (Panel B in Tables III and IV). The significantly negative coefficients on the market-to-book ratio in the industry-adjusted

[12]Note that we assume that the market value of debt is equal to the book value of debt for this calculation.

Table III. Regressions of Long-Term Debt Ratios

This table presents regressions of long-term debt scaled by assets for the sample firms before they file for Chapter 11 and after they have emerged. In Panel A, the dependent variable is the ratio of long-term debt (LTD) to the book value of assets. In Panel B, the dependent variable is the ratio of LTD to the market value of assets. In Panel C, the dependent variable is the industry-adjusted ratio of LTD to the market value of assets, and all of the independent variables are also industry-adjusted. F is the fiscal year of the filing and E is the fiscal year of the emergence. Industry M/B ratio is the median market-to-book ratio of the assets of firms in the same three-digit SIC code. PP&E is property, plant, and equipment, while NOLC is the net operating loss carryforward. The variables have been winsorized at the 5th and 95th percentiles.

	F-2		F-1		E	
	Coeffic.	***t*-stat.**	**Coeffic.**	***t*-stat.**	**Coeffic.**	***t*-stat.**
Panel A. Long-Term Debt/Book Value of Assets						
Intercept	0.277*	1.91	0.107	0.65	0.063	0.66
Log (book value of assets)	0.010	0.60	0.013	0.68	0.018	1.61
Industry M/B ratio	0.047	0.79	0.018	0.24	0.028	0.58
Operating income/assets	0.296	1.06	0.203	0.78	0.205	1.06
Net PP&E/assets	0.128	1.26	0.216**	1.99	0.285***	4.47
Log (NOLC/assets)	−0.033	−0.37	0.087	1.15	−0.054	−1.44
Adjusted R^2	0.002		0.008		0.157	
Model *p*-value	0.376		0.278		0.000	
Number of observations	163		166		169	
Panel B. Long-Term Debt/Market Value of Assets						
Intercept	0.208	1.63	0.132	0.87	0.048	0.45
Log (book value of assets)	0.025*	1.72	0.013	0.76	0.028**	2.23
Industry M/B ratio	−0.008	−0.14	−0.002	−0.03	0.019	0.36
Operating income/assets	0.123	0.51	0.396	1.65	−0.046	−0.21
Net PP&E/assets	0.093	1.07	0.216**	2.19	0.261***	3.67
Log (NOLC/assets)	−0.041	−0.56	0.035	0.52	−0.077*	−1.88
Adjusted R^2	0.024		0.038		0.141	
Model *p*-value	0.145		0.072		0.000	
Number of observations	141		138		148	
Panel C. Industry-Adjusted Figures						
Intercept	0.260***	11.81	0.177***	6.14	0.139***	4.86
Assets	−0.000	−0.92	−0.000	−0.49	0.000	0.03
M/B ratio	−0.153***	−4.19	−0.121***	−3.79	−0.161***	−3.27
Operating income	0.515**	2.37	0.335*	1.75	0.184	0.98
PP&E/assets	−0.018	−0.16	0.242	1.53	0.289***	2.89
Log (NOLC/assets)	−0.046	−0.80	0.081	1.38	−0.055	−1.44
Adjusted R^2	0.133		0.122		0.108	
Model *p*-value	0.000		0.001		0.001	
Number of observations	141		138		148	

***Significant at the 0.01 level.
**Significant at the 0.05 level.
*Significant at the 0.10 level.

Table IV. Regressions of Total Debt Ratios

This table presents regressions of total debt scaled by assets for the sample firms before they file for Chapter 11 and after they have emerged. In Panel A, the dependent variable is the ratio of total debt to the book value of assets. In Panel B, the dependent variable is the ratio of total debt to the market value of assets. In Panel C, the dependent variable is the industry-adjusted ratio of total debt to the market value of assets, and all of the independent variables are also industry-adjusted. F is the fiscal year of the filing and E is the fiscal year of the emergence. Industry M/B ratio is the median market-to-book ratio of the assets of firms in the same three-digit SIC code. PP&E is property, plant, and equipment, while NOLC is the net operating loss carryforward. The variables have been winsorized at the 5th and 95th percentiles.

	F-2		F-1		E	
	Coeffic.	***t*-stat.**	**Coeffic.**	***t*-stat.**	**Coeffic.**	***t*-stat.**
Panel A. Total Debt/Book Value of Assets						
Intercept	0.335**	2.23	0.829***	4.15	0.230**	2.53
Log (book value of assets)	−0.004	−0.21	−0.068***	−2.91	0.002	0.21
Industry M/B ratio	0.106*	1.70	0.163*	1.80	0.004	0.09
Operating income/assets	0.651**	2.24	0.768**	2.42	0.125	0.68
Net PP&E/assets	0.220**	2.07	0.247*	1.87	0.337***	5.49
Log (NOLC/assets)	0.300***	3.26	0.317***	3.45	−0.039	−1.08
Adjusted R^2	0.090		0.165		0.163	
Model *p*-value	0.001		0.000		0.000	
Number of observations	161		165		168	
Panel B. Total Debt/Market Value of Assets						
Intercept	0.454***	3.93	0.522***	5.04	0.277***	2.62
Log (book value of assets)	0.006	0.47	−0.007	−0.62	0.006	0.49
Industry M/B ratio	−0.055	−1.14	0.020	0.42	−0.011	−0.22
Operating income/assets	0.255	1.17	0.713***	4.38	−0.109	−0.51
Net PP&E/assets	0.114	1.46	0.120*	1.78	0.293***	4.19
Log (NOLC/assets)	0.156**	2.34	0.078*	1.69	−0.076*	−1.91
Adjusted R^2	0.031		0.119		0.116	
Model *p*-value	0.100		0.001		0.000	
Number of observations	140		138		147	
Panel C. Industry-Adjusted Figures						
Intercept	0.290***	13.82	0.394***	17.99	0.132***	4.73
Assets	−0.000**	−2.18	−0.000**	−2.34	−0.000	−0.54
M/B ratio	−0.081**	−2.34	−0.044*	−1.82	−0.180***	−3.75
Operating income	0.460**	2.23	0.527***	3.62	0.086	0.47
PP&E/assets	0.066	0.59	0.053	0.44	0.250**	2.57
Log (NOLC/assets)	0.131**	2.40	0.104**	2.32	−0.046	−1.26
Adjusted R^2	0.105		0.135		0.108	
Model *p*-value	0.001		0.000		0.001	
Number of observations	140		138		147	

***Significant at the 0.01 level.
**Significant at the 0.05 level.
*Significant at the 0.10 level.

regression models in Tables III and IV indicate that relative to industry norms, firms with higher (lower) market-to-book ratios tend to use less (more) debt.

Net property, plant, and equipment (PP&E) measures the collateral value of the assets. Higher collateral values enable firms to take on more debt. Consistent with Graham, Lemmon, and Schallheim (1998), we find that the correlation between net PP&E scaled by assets and debt ratios is generally positive and statistically significant when firms emerge from the bankruptcy process. Although also positive, the relationship is weaker during the years leading up to Chapter 11.[13]

Numerous studies estimate cross-sectional regressions of debt ratios and find that profitability is negatively related to debt ratios. Such findings are generally interpreted as consistent with the pecking-order effect, wherein large profits allow firms to circumvent the need to raise external funds causing debt ratios to fall progressively. In contrast, we find significantly positive correlations between profitability and total debt ratios (Table IV) in the period preceding the Chapter 11 filings.[14]

Prior to their reorganizing, the Chapter 11 firms have a positive relationship between NOLC and total debt ratios (Table IV). This is contrary to the predictions of the static trade-off theory, which suggests that firms with substantial nondebt tax shields would, all else being equal, use less debt. However, as argued by Hovakimian, Hovakimian, and Tehranian (2004), the positive association that we observe for the Chapter 11 firms is likely to arise from a pecking-order effect, whereby cumulative losses erode the equity, thereby driving up the debt ratio. Although the signs on the NOLC variable are generally negative when the firms emerge from Chapter 11 (as the static trade-off theory would predict), they do not meet conventional levels of statistical significance. One possibility is that debt ratios are somewhat sticky through Chapter 11 reorganizations due to holdout problems as creditors with senior claims remain reluctant to trade their senior debt claims for equity. Thus, the firms remain overlevered even if traditional capital structure theories suggest that lowering the degree of leverage would better maximize the value of the entire firm. A second possibility is that it is difficult to accurately value the NOLC of bankrupt firms because of the myriad of tax rules that govern the use of NOLC for firms that undergo significant organizational changes. For instance, Section 382 limitations could significantly limit the tax breaks associated with NOLC, and NOLC could be eliminated entirely by an ownership change within two years of the firm's emergence from Chapter 11.

Next, we examine the effect of prebankruptcy debt ratios and various characteristics of the bankruptcy process on postbankruptcy debt ratios. Table V reports regressions of long-term and total debt ratios for the sample firms immediately after they emerge from Chapter 11. Since we examine only fresh-start reorganizations, there is no need to separately estimate regressions based on book value and market value capital structure measures as fresh-start accounting rules require the financial statements of the newly reorganized firms to be "reset" to reflect the agreed-upon valuation in the final plan of reorganization.

In contrast to the results reported by Gilson (1997), we find that prebankruptcy debt ratios influence postbankruptcy debt ratios. Perhaps Gilson's sample was too small, and, therefore, the statistical power too weak to reveal this relation. In any event, our results are consistent with

[13]We also estimated all of our regression models including as additional variables Other Intangibles (intangibles other than good will) and Goodwill (both scaled by assets). Neither variable was significant in any of the models and none of the other results changed. As a result, we did not tabulate the additional models.

[14]In additional tests, we subdivided the sample on the basis of reporting only positive operating income in the year of the Chapter 11 filing and in the prior two years versus otherwise. The set of firms that report only positive levels of operating income have higher mean and median debt levels in all three periods.

Table V. Regressions of the Effect of the Chapter 11 Process on Debt Ratios

This table presents regressions of long-term debt and total debt scaled by assets for the sample firms immediately after they have emerged from Chapter 11. Industry M/B ratio is the median market-to-book ratio of the assets of firms in the same three-digit SIC code. PP&E is property, plant, and equipment, while NOLC is the net operating loss carryforward. The variables have been winsorized at the 5th and 95th percentiles.

	Long-Term Debt		Total Debt	
	Coefficient	***t*-stat.**	**Coefficient**	***t*-stat.**
Intercept	0.144	0.88	0.297*	1.90
Log (book value of assets)	0.022*	1.95	0.008	0.70
Industry M/B ratio	0.022	0.47	−0.010	−0.23
Operating income/assets	0.194	1.00	0.106	0.57
Net PP&E/assets	0.289***	4.57	0.331***	5.44
Log (NOLC/assets)	−0.057	−1.54	−0.041	−1.15
Short-term debt ratio before Ch. 11	0.097**	2.24	0.107**	2.56
Long-term debt ratio before Ch. 11	0.143**	2.12	0.123*	1.89
Log (days in Chapter 11)	−0.029	−1.45	−0.025	−1.28
Southern District of NY dummy	−0.048	−1.06	−0.043	−0.99
District of Delaware dummy	−0.032	−0.90	−0.027	−0.80
Prepack dummy	−0.016	−0.38	−0.018	−0.43
Adjusted R^2	0.206		0.205	
Model *p*-value	0.000		0.000	
Number of observations	166		166	

***Significant at the 0.01 level.
**Significant at the 0.05 level.
*Significant at the 0.10 level.

the conjecture that the Chapter 11 process does not provide the firms with a clean slate upon which a new capital structure can be established, even when we focus exclusively on fresh-start firms, which by definition have had a material change in equity ownership as a result of the reorganization.

Our finding that debt is sticky in Chapter 11 reorganizations is consistent with arguments made by Roe (1983) and Bebchuk (1988) that the Chapter 11 process is flawed in that it does not allow firms to shed enough of their debt burden. It is also consistent with the existence of clientele effects as we discussed earlier. Alternatively, Kahl's (2002) dynamic liquidation theory might provide an explanation. In particular, creditors might be unwilling to give up their debt claims as they view them as an effective means of forcing a later liquidation should the firms not return readily to profitability.[15]

We also include filing districts in the regression due to the ongoing debate that some districts are procreditor while others are prodebtor. If this is the case, one might expect to find material differences in the debt ratios of firms emerging from different jurisdictions. This is not borne out

[15]Kahl's (2002) model predicts a positive correlation between postemergence debt ratios and the level of uncertainty regarding the firm's future economic viability. Although untabulated, we estimated additional regression models that included a measure of uncertainty (the standard deviation of operating income scaled by assets, estimated over the five years prior to the bankruptcy filing) as suggested by Kahl as an independent variable. The coefficient on this uncertainty parameter did not statistically differ from zero.

Table VI. Regressions of the Chapter 11 Duration

This table presents regressions of the logarithm of the number of days that the firms spend in Chapter 11 against various financial variables immediately before filing and on various Chapter 11 characteristics. Industry M/B ratio is the median market-to-book ratio of the assets of firms in the same three-digit SIC code. PP&E is property, plant, and equipment, while NOLC is the net operating loss carryforward. Positive operating income is a binary variable equal to one for firms that reported positive operating income in the year of the bankruptcy filing and in each of the two previous years, and zero otherwise. The variables have been winsorized at the 5th and 95th percentiles.

	Whole Sample		Excluding Prepacks	
	Coeffic.	***t*-stat.**	**Coeffic.**	***t*-stat.**
Intercept	7.318***	16.72	7.501***	14.31
Log (book value of assets)	−0.046	−0.92	−0.024	−0.43
Industry M/B ratio	0.323*	−1.73	−0.474**	−2.05
Operating income/assets	1.889**	2.15	2.345**	2.33
Net PP&E/assets	0.089	0.32	0.008	0.02
Log (NOLC/assets)	−0.220	−1.13	−0.280	−1.13
Short-term debt ratio	−0.508***	−2.83	−0.526**	−2.42
Long-term debt ratio	−0.324	−1.15	−0.419	−1.29
Southern District of New York dummy	−0.029	−0.15	−0.025	−0.11
District of Delaware dummy	−0.382***	−2.74	−0.431**	−2.46
Prepack dummy	−1.124***	−7.74		
Positive operating income dummy	−0.407**	−2.32	−0.470**	−2.31
Adjusted R^2	0.436		0.176	
Model *p*-value	0.000		0.000	
Number of observations	162		119	

***Significant at the 0.01 level.
**Significant at the 0.05 level.
*Significant at the 0.10 level.

by the data, which indicates that in a multivariate setting, filing districts are not systematically related to postemergence debt ratios.

C. Determinants of the Duration of the Chapter 11 Reorganization Process

Table VI presents our final regression model that investigates the determinants of the length of time that firms spend in the Chapter 11 process. The dependent variable in the model is the logarithm of the number of days between petition filing and an effective plan of reorganization. The independent variables are otherwise identical to previous regressions with the exception being the positive operating income variable. This variable is a binary variable equal to one (zero otherwise) for all firms that reported only positive levels of operating income in the three years including the year of the bankruptcy filing and the prior two years. The variables of primary interest here are the debt ratios, the indicator variables representing bankruptcy court districts, the prepackaged bankruptcy indicator, and the positive operating income indicator. We run the regression using both the whole sample and the sample of firms that do not use prepacks. Since the results are not materially different across these samples, we only discuss the results for the whole sample.

The estimated coefficients on both debt ratios are significantly negative with the coefficient on the short-term debt ratio significantly different from zero at the 1% level.[16] Thus, there is an inverse relationship between debt ratios (particularly short term) and the time it takes to emerge from Chapter 11. This correlation is also quite apparent in the univariate results presented in Table II. As we discussed earlier, short-term debt ratios are likely to spike when large debt issues mature and/or when the firm misses a scheduled payment to a major creditor due to a temporary shortage of funds. In the latter case, the debt is often all reclassified as short term. The data suggest that firms that fit this profile are able to emerge more quickly perhaps because they have fewer, more concentrated creditor classes and/or because they were simply ovelevered but still clearly economically viable. As noted earlier, companies that have large spikes in their short-term debt ratios are more likely to file prepackaged bankruptcy plans. The significantly negative coefficient on the positive operating income variable demonstrates firms that consistently report positive operating results spend less time in the reorganization process. This result is consistent with the notion that firms can more quickly remedy strictly financial rather than economic distress.

Not surprisingly, the coefficient on the prepack dummy is negative and statistically significant indicating that firms filing prenegotiated reorganization plans with their bankruptcy petitions spend less time in court, consistent with Tashjian, Lease, and McConnell (1996). Moreover, cases filed in Delaware appear to, all else being equal, spend less time in court. One interpretation of these results is that Delaware's expertise in the area of corporate law, coupled with the greater volume of Chapter 11 cases filed there, has enabled Delaware to become more efficient in processing bankruptcy cases. An alternative interpretation is that Delaware is expediting the process as part of a competitive strategy to attract bankruptcy business. A byproduct of this could be that firms emerge from reorganizations in the Delaware district prematurely and with too much debt. However, recall that none of the coefficients on the filing district dummy variables in our Table V regressions on debt ratios differs statistically from zero. Thus, there is no support for the notion that postemergence debt ratios for firms that reorganize under the supervision of Delaware courts are abnormally high.

IV. Conclusion

In this study, we investigate a large sample of firms that emerged from Chapter 11 reorganizations with the primary aim of improving our understanding as to how these reorganizations affect capital structure. Even though Chapter 11 reorganizations wipe out the majority of short-term debt, we find, like Gilson (1997), that total debt ratios remain significantly higher than those of industry peers immediately after emergence. Cross-sectional regressions of debt ratios suggest that observed postemergence capital structures are only partially consistent with the predictions of the static trade-off capital structure theory. Moreover, unlike Gilson, we find that post-reorganization debt ratios are positively related to pre-reorganization debt ratios, suggesting that the debt is sticky. While our collective results are generally consistent with the arguments put forth by Roe (1983) and Bebchuk (1988) and others that the Chapter 11 process leaves firms with too much debt, one cannot easily rule out theories such as Kahl's (2002) that predicts that optimal debt ratios increase for firms in the bankruptcy process. However, our attempts to document

[16] We estimated an additional model (untabulated) where we replaced the short-term debt and long-term debt ratios with the total debt ratio. The coefficient on the total debt ratio in this model was significantly negative. The coefficients and significance levels for the remaining variables were nearly identical to the model presented in Table VI.

further empirical support for Kahl's theory are, at best, inconclusive, which we attribute partially to the difficulty in obtaining sufficiently detailed information on firms that have entered into bankruptcy proceedings. ■

References

Alderson, M.J. and B.L. Betker, 1995, "Liquidation Costs and Capital Structure," *Journal of Financial Economics* 39, 45-69.

Baird, D.G., 1986, "The Uneasy Case for Corporate Reorganizations," *Journal of Legal Studies* 15, 127-147.

Baker, M. and J. Wurgler, 2002, "Market Timing and Capital Structure," *Journal of Finance* 57, 1-32.

Barry, C.B., S.C. Mann, V.T. Mihov, and M. Rodriguez, 2008, "Corporate Debt Issuance and the Historical Level of Interest Rates," *Financial Management* 37, 413-430.

Bebchuk, L., 1988, "A New Approach to Corporate Reorganization," *Harvard Law Review* 101, 775-804.

Berger, P.G., E. Ofek, and D.L. Yermack, 1997, "Managerial Entrenchment and Capital Structure Decisions," *Journal of Finance* 52, 1411-1438.

Bradley, M., G.A. Jarrell, and E.H. Kim, 1984, "On the Existence of an Optimal Capital Structure: Theory and Evidence," *Journal of Finance* 39, 857-878.

Bradley, M. and M. Rosenzweig, 1992, "The Untenable Case for Chapter 11," *Yale Law Journal* 101, 1043-1095.

Daines, R., 2001, "Does Delaware Law Improve Firm Value?" *Journal of Financial Economics* 62, 525-558.

DeAngelo, H. and R. Masulis, 1980, "Optimal Capital Structure Under Corporate and Personal Taxation," *Journal of Financial Economics* 8, 3-29.

Dittmar, A., 2004, "Capital Structure in Corporate Spin-Offs," *Journal of Business* 77, 9-43.

Fama, E.F. and K.R. French, 2002, "Testing Trade-Off and Pecking Order Predictions about Dividends and Debt," *Review of Financial Studies* 15, 1-33.

Frank, M.Z. and V.K. Goyal, 2009, "Capital Structure Decisions: Which Factors Are Reliably Important?" *Financial Management* 38, 1-37.

Gilson, S.C., 1997, "Transactions Costs and Capital Structure Choice: Evidence from Financially Distressed Firms," *Journal of Finance* 52, 161-196.

Gilson, S.C., E.S. Hotchkiss, and R.S. Ruback, 2000, "Valuation of Bankrupt Firms," *Review of Financial Studies* 13, 43-74.

Graham, J. and C. Harvey, 2001, "The Theory and Practice of Corporate Finance: Evidence from the Field," *Journal of Financial Economics* 60, 187-243.

Graham, J.R., M.L. Lemmon, and J.S. Schallheim, 1998, "Debt, Leases, Taxes, and the Endogeneity of Corporate Tax Status," *Journal of Finance* 53, 131-162.

Heron, R. and W.G. Lewellen, 1998, "An Empirical Analysis of the Reincorporation Decision," *Journal of Financial and Quantitative Analysis* 33, 549-568.

Hotchkiss, E.S., 1995, "Postbankruptcy Performance and Management Turnover," *Journal of Finance* 50, 3-21.

Hovakimian, A., G. Hovakimian, and H. Tehranian, 2004, "Determinants of Target Capital Structure: The Case of Dual Debt and Equity Issues," *Journal of Financial Economics* 71, 517-540.

Hovakimian, A., T. Opler, and S. Titman, 2001, "The Debt-Equity Choice," *Journal of Financial and Quantitative Analysis* 36, 1-24.

Kahl, M., 2002, "Economic Distress, Financial Distress, and Dynamic Liquidation," *Journal of Finance* 57, 135-168.

Kim, E.H., 1982, "Miller's Equilibrium, Shareholder Leverage Clienteles, and Optimal Capital Structure," *Journal of Finance* 37, 301-318.

James, C., 1995, "When Do Banks Take Equity in Debt Restructurings?" Review *of Financial Studies* 8, 1209-1234.

LoPucki, L.M. and J.W. Doherty, 2002, "Why Are Delaware and New York Bankruptcy Reorganizations Failing?" *Vanderbilt Law Review* 55, 1933-1986.

LoPucki, L.M. and S. D. Kalin, 2001, "The Failure of Public Company Bankruptcies in Delaware and New York: Empirical Evidence of a 'Race to the Bottom'," *Vanderbilt Law Review* 54, 231-264.

LoPucki, L.M. and W.C. Whitford, 1990, "Bargaining Over Equity's Share in the Bankruptcy Reorganization of Large, Publicly Held Companies," *University of Pennsylvania Law Review* 139, 125-196.

LoPucki, L.M. and W.C. Whitford, 1991, "Venue Choice and Forum Shopping in the Bankruptcy Reorganization of Large, Publicly Held Companies," *Wisconsin Law Review* 11, 11-63.

LoPucki, L.M. and W.C. Whitford, 1993, "Patterns in the Bankruptcy Reorganization of Large, Publicly Held Companies," *Cornell Law Review* 78, 597-618.

MacKie-Mason, J.K., 1990, "Do Taxes Affect Corporate Financial Decisions?" *Journal of Finance* 45, 1471-1493.

Marsh, P., 1982, "The Choice between Equity and Debt: An Empirical Study," *Journal of Finance* 37, 121-144.

Mehrotra, V., W. Mikkelson, and M. Partch, 2003, "The Design of Financial Policies in Corporate Spinoffs," *Review of Financial Studies* 16, 1359-1388.

Modigliani, F., 1982, "Debt, Dividend Policy, Taxes, Inflation, and Market Valuation," *Journal of Finance* 37, 255-273.

Modigliani, F. and M. Miller, 1963, "Corporation Income Taxes and the Cost of Capital: A Correction," *American Economic Review* 53, 433-443.

Myers, S.C., 1984, "The Capital Structure Puzzle," *Journal of Finance* 39, 575-592.

Myers, S.C. and N. Majluf, 1984, "Corporate Financing and Investment Decisions When Firms Have Information Investors Do Not Have," *Journal of Financial Economics* 13, 187-221.

Roe, M., 1983, "Bankruptcy and Debt: A New Model for Corporate Reorganization," *Columbia Law Review* 83, 527-602.

Shyam-Sunder, L. and S.C. Myers, 1999, "Testing Static Trade-Off Against Pecking Order Models of Capital Structure," *Journal of Financial Economics* 51, 219-244.

Tashjian, E., R.C. Lease, and J.J. McConnell, 1996, "Pre-Packs: An Analysis of Prepackaged Bankruptcies," *Journal of Financial Economics* 40, 135-162.

Titman, S. and R. Wessels, 1988, "The Determinants of Capital Structure Choice," *Journal of Finance* 43, 1-19.

Weiss, L.A., 1990, "Bankruptcy Resolution: Direct Costs and Violation of Priority of Claims," *Journal of Financial Economics* 27, 285-314.

Weiss, L.A. and K.H. Wruck, 1998, "Information Problems, Conflicts of Interest and Asset Stripping: Chapter 11's Failure in the Case of Eastern Airlines," *Journal of Financial Economics* 48, 55-97.

Wruck, K.H., 1990, "Financial Distress, Reorganization, and Organizational Efficiency," *Journal of Financial Economics* 27, 419-446.